

**Division of Air Resources  
Permit Review Report**

**Permit ID: 2-6105-00263/00008**

**Renewal Number: 3**

**Modification Number: 2 04/15/2020**

**Facility Identification Data**

Name: STARRETT CITY POWER PLANT

Address: 165 ELMIRA LOOP

BROOKLYN, NY 11239

**Owner/Firm**

Name: BSC OWNER LLC

Address: 1201 BROADWAY STE 401

NEW YORK, NY 10001, USA

Owner Classification: Corporation/Partnership

**Permit Contacts**

Division of Environmental Permits:

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LONG ISLAND CITY, NY 11101

Phone:

Division of Air Resources:

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Air Permitting Contact:

Name: BILL FOLEY

Address: STARRETT CITY POWER PLANT

165 ELMIRA LOOP

BROOKLYN, NY 11239

Phone: 917 843 7967

**Permit Description**

**Introduction**

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

**Summary Description of Proposed Project**

This project consists of adding two new emission sources and changing the classification of three existing emission sources to "emergency generators" with maximum annual hours of operation at 500 hours each. The two new emission sources are two identical diesel Caterpillar generators model CAT 175-20 each

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rated at 4 MW [ 5364 bhp-hr mechanical output]. The two Caterpillar CAT 175-20 diesel engines are compression ignition engines and each are equipped with SCR emission control system including a Diesel Particulate Filter, an Oxidation Catalyst, and a SCR catalyst for NOx emission reduction. The anticipated NOx emission reduction is 92.7% to an emission rate of 0.5 grams NOx per bhp-hr. The two new diesel generators are identified as DG04 and DG05 as part of emission unit U-00004 in the Mod 2 application. Each will have its own stack.

The two new 4 MW diesel generators will replace the three old Nordberg electric generators, identified as emission sources OODG1, OODG2, and OODG3 of EU 0-00002. These three old Nordberg electric generators will be utilized as "emergency generators", each operating at a maximum of 500 hours per year.

The SCR NOx control systems are identified as SCR04 for 0DG04 and SCR05 for 0DG05. The new process definitions are: D04 for emission source 0DG04 firing diesel fuel oil, D05 for emission source 0DG05 firing diesel. The new emission points for the new diesel generator emission sources are designated respectively, 0DG04 and 0DG05.

The two SCR control systems [SCR04 and SCR05] each include: a Diesel Particulate Housing [DPF], a Mixing Section with a reactant injector, SCR Housing, a reagent [urea] delivery system with associated controls , and reagent storage tank [1900 gallons capacity]. The DPF housing contains a particulate filter and an oxidation catalyst for CO and NMHC emission reduction. The Mixing Section introduces the reagent into the exhaust stream. The SCR housing contains the SCR catalyst for NOx emission reduction. The reagent is 32.5% urea solution. The application includes a Part 231 analysis. Facility wide net emission increase emission of NOx and VOC are limited below the significant net increase threshold 25 tpy threshold for a NSR major modification by applicability.

The new diesel generators will be located in enclosures alongside the western boundary of the Starrett City property adjacent to Van Siclen Avenue, east of the power plant building. The power plant building, enclosing the four CE boilers and the three Nordberg engines, is designated Building 1. The new enclosures for the new diesel generators [emission unit U-00002, emission sources 0DG04 and 0DG05)] are designated Buildings 2A for 0DG04 the northern most diesel generator and 2B for 0DG05 the southern most diesel generator.

**Attainment Status**

STARRETT CITY POWER PLANT is located in the town of BROOKLYN in the county of KINGS. The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT

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Particulate Matter< 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	SEVERE NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

\* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

\*\* NOx has a separate ambient air quality standard in addition to being an ozone precursor.

**Facility Description:**

Starrett City [aka Spring Creek Towers] is a Housing Development in Brooklyn, New York that produces all of its own electricity, heating and cooling through their power plant. The facility has four identical Combustion Engineering boilers [140 MMBtu/hr each], which are capable of firing natural gas and residual oil, and three identical Nordberg large bore compression ignition engines [2 MW each] that only operate on #2 fuel oil. Steam from the boilers is fed to two steam turbines to generate 6 MW each. The plant currently has a total electric generating capacity of 18 MW.

This application Modification is to add two new identical diesel Caterpillar generators model CAT 175-20 each rated at 4 MW and to change the classification of three existing emission sources to "emergency generators" with maximum annual hours of operation at 500 hours each. The two Caterpillar CAT 175-20 diesel engines are compression ignition engines, each equipped with SCR emission control system including a Diesel Particulate Filter, an Oxidation Catalyst, and a SCR catalyst for NOx emission reduction. The two new 4 MW diesel generators will replace the three old Nordberg electric generators.

The Starrett city, in order to avoid the 6 NTCRR Part 231-6 major modification requirements, has limited the net emission increase of criteria contaminants NOx and VOC below the applicability thresholds 25 tpy. Facility has done this by limiting the NOx and VOC emissions from two new sources to 38.13 tpy and 10.68 respectively and creating 16.66 of NOx and 2.22 tpy of VOC Emission Reduction Credits by reclassifying operation of three existing engines.

**Permit Structure and Description of Operations**

The Title V permit for STARRETT CITY POWER PLANT

is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning

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device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.

STARRETT CITY POWER PLANT is defined by the following emission unit(s):

Emission unit 000004 - This emission unit 00004 consists of two emission sources, 0DG04 and 0DG05, each a Caterpillar CAT 175-20 diesel generator rated at 4 MW [5364 brhp-hr mechanical output] with a Miratech Diesel Particulate filter for PM reduction, Diesel oxidation catalyst [OC] for CO reduction, and SCR control systems for NOx reduction (utilizing a 32.5% urea solution). The reaction tank for each system has a 1900 gallon capacity for urea solution storage. Each emission source has its own stack / emission point.

Each engine is equipped with a diesel oxidation catalyst for CO reduction to comply with the 40 CFR 63 Subpart ZZZZ requirements. Compliance with NESAHP 4Z is certified every six months.

The two new diesel generators will be in enclosures located immediately west of Van Siclen Avenue. The enclosures are designated Buildings 2A for 0DG04, the northern most generator, and 2B for 0DG05, the southern most generator. SCR04 and SCR05 are located above their respective enclosures.

Emission unit 000004 is associated with the following emission points (EP):

0DG04, 0DG05

Process: D04 is located at Building 2A - Diesel Generator, 0GD04 firing ultra low sulfur diesel fuel.

Process: D05 is located at Building 2B - Diesel generator, 0DG05 firing ultra low sulfur diesel fuel.

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Emission unit 000002 - Three identical Nordberg large bore compression ignition diesel engines operating as emergency generators with annual operation hours limited to 500 hours each.

Each engine has its own stack to exhaust to the atmosphere. Each engine is equipped with a Johnson Mathhey carbon monoxide(CO) catalyst system to reduce CO emissions for compliance with EPA's 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The CO catalyst system on each engine guarantee CO emission below 23ppm or a 70% reduction. The catalyst system is complete with a continuous parametric monitoring system(CPMS).

Emission unit 000002 is associated with the following emission points (EP):  
00DG1, 00DG2, 00DG3

Process: 502 is located at POWER PLANT, Building 1 - Nordberg generator rated at 18.13 MMBtu/hr used to generate electricity for the apartment buildings. #2 fuel oil is used to fuel the generator.

Process: 602 is located at POWER PLANT, Building 1 - Nordberg generator used to generate electricity for the apartment buildings. #2 fuel oil is used to fuel the generator.

Process: 702 is located at POWER PLANT, Building 1 - Nordberg generator rated at 18.13 mmbtu/hr(2MW) used to generate electricity for the apartment buildings. #2 fuel oil is used to fuel the generator.

Emission unit 000001 - Four identical Combustion Engineering type 28-VP-12Ww boilers (each with maximum heat input capacity 140 mmbtu/hr) that are capable of firing either natural gas or low sulfur #6 fuel oil. Each boiler emits exhaust flue gas through its own separate stacks.

The boilers are being upgraded per the NOx RACT compliance Plan with new Zecco GB low NOx burners (LNB), flue gas re circulation(FGR) and conversion from #6 oil to #2 oil as the back up fuel to the primary fuel, natural gas. The upgrade project is scheduled for completion in the summer season of 2016.

Emission unit 000001 is associated with the following emission points (EP):  
000B1, 000B2, 000B3, 000B4

Process: 009 is located at Building 1 - Boilers 1, 2, 3 and 4 burning #2 oil to generate steam and electricity for the apartment.

gas to generate steam for the apartment building & electricity.

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Process: 102 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler #1 firing # 6 fuel oil to generate steam for the apartment building & electricity.

Process: 201 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 2 firing natural gas to generate steam for the apartment building & electricity

Process: 202 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 2 firing #6 fuel oil to generate steam for the apartment building & electricity.

Process: 301 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 3 firing natural gas to generate steam for the apartment building & electricity

Process: 302 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 3 firing # 6 fuel oil to generate steam for the apartment building & electricity.

Process: 401 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 4 firing natural gas to generate steam for the apartment building & electricity

Process: 402 is located at POWER PLANT, Building 1 - Combustion Engineering Boiler # 4 firing # 6 fuel oil to generate steam for the apartment building & electricity.

Emission unit 01TANK - One (1) 400,000 gallon #6 fuel oil storage tank. This is a vertical fixed roof tank.

Emission unit 01TANK is associated with the following emission points (EP):  
TANK1

Process: 6FO is located at OUTSIDE POWER PLANT - ONE (1) 400,000 GALLON #6 FUEL OIL STORAGE TANK WITH A VERTICAL FIXED ROOF.

**Title V/Major Source Status**

STARRETT CITY POWER PLANT is subject to Title V requirements. This determination is based on the following information:

Starrett City Power Plant is a major facility since the potential emissions of nitrogen oxides and carbon monoxide are greater than the major source thresholds (100 tons/year for carbon monoxide and 25 tons per year for nitrogen oxides)

**Program Applicability**

The following chart summarizes the applicability of STARRETT CITY POWER PLANT with regards to the principal air pollution regulatory programs:

Regulatory Program	Applicability
PSD	NO
NSR (non-attainment)	YES

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NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

**NOTES:**

**PSD** Prevention of Significant Deterioration (40 CFR 52, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NSR** New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NESHAP** National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

**MACT** Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

**NSPS** New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

**Title IV** Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

**Title VI** Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

**RACT** Reasonably Available Control Technology (6 NYCRR Parts 212-3, 220-1.6, 220-1.7, 220-2.3, 220-2.4, 226, 227-2, 228, 229, 230, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available,



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considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

**SIP** State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

**Compliance Status**

Facility is in compliance with all requirements.

**SIC Codes**

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

**SIC Code**

**Description**

6514

DWELLING OPERATORS, EXC. APART

**SCC Codes**

SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

**SCC Code**

**Description**

1-01-005-01

EXTERNAL COMBUSTION BOILERS - ELECTRIC GENERATION

ELECTRIC UTILITY BOILER - DISTILLATE OIL Grades 1 and 2 Oil

1-03-004-01

EXTERNAL COMBUSTION BOILERS - COMMERCIAL/INDUSTRIAL

COMMERCIAL/INSTITUTIONAL BOILER - RESIDUAL OIL

Grade 6 Oil

1-03-006-01

EXTERNAL COMBUSTION BOILERS - COMMERCIAL/INDUSTRIAL

COMMERCIAL/INSTITUTIONAL BOILER - NATURAL GAS

Over 100 MMBtu/Hr

2-02-004-01

INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION LARGE BORE ENGINE

Diesel

4-04-001-60

BULK TERMINALS/PLANTS



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BULK TERMINALS  
INTERNAL FLOAT ROOF W/ PRIMARY SEAL-SPECIFY  
LIQUID:STANDING LOSS

**Facility Emissions Summary**

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE for each contaminant that is displayed represents the facility-wide PTE in tons per year (tpy) or pounds per year (lbs/yr). In some instances the PTE represents a federally enforceable emissions cap or limitation for that contaminant. The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

<b>Cas No.</b>	<b>Contaminant</b>	<b>PTE lbs/yr</b>	<b>PTE tons/yr</b>	<b>Actual lbs/yr</b>	<b>Actual tons/yr</b>
0NY750-00-0	CARBON DIOXIDE EQUIVALENTS	781564554			
000630-08-0	CARBON MONOXIDE	492554			
007439-92-1	LEAD	2			
0NY210-00-0	OXIDES OF NITROGEN	586000			
0NY075-00-0	PARTICULATES	54244			
0NY075-02-5	PM 2.5	31961			
0NY075-00-5	PM-10	30800			
007446-09-5	SULFUR DIOXIDE	8200			
0NY100-00-0	TOTAL HAP	10923			
0NY998-00-0	VOC	36520			

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)**

The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

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**Item B: Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)**

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

**Item C: Certification by a Responsible Official - 6 NYCRR Part 201-6.2(d)(12)**

Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official. This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

**Item D: Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)**

The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

**Item E: Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)**

This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**Item F: Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)**

It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

**Item G: Property Rights - 6 NYCRR 201-6.4(a)(6)**

This permit does not convey any property rights of any sort or any exclusive privilege.

**Item H: Severability - 6 NYCRR Part 201-6.4(a)(9)**

If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

**Item I: Permit Shield - 6 NYCRR Part 201-6.4(g)**

All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination

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or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

- i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;
- ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;
- iii. The applicable requirements of Title IV of the Act;
- iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

**Item J: Reopening for Cause - 6 NYCRR Part 201-6.4(i)**

This Title V permit shall be reopened and revised under any of the following circumstances:

- i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 201-6.7 and Part 621.
- ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
- iii. The Department or the Administrator determines that the Title V permit must be revised or reopened to assure compliance with applicable requirements.
- iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

**Item K: Permit Exclusion - ECL 19-0305**

The issuance of this permit by the Department and the receipt thereof by the Applicant

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does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

**Item L: Federally Enforceable Requirements - 40 CFR 70.6(b)**

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

**NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS**

**Item A: Emergency Defense - 6 NYCRR 201-1.5**

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

- (a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (1) An emergency occurred and that the facility owner or operator can identify the cause(s) of the emergency;
  - (2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
  - (3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - (4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- (b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- (c) This provision is in addition to any emergency or upset provision contained in any

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**Renewal Number: 3**

**Modification Number: 2 04/15/2020**

applicable requirement. item\_02

**Item B: General Provisions for State Enforceable Permit Terms and Condition - 6  
NYCRR Part 201-5**

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

**Regulatory Analysis**

<b>Location Facility/EU/EP/Process/ES</b>	<b>Regulation</b>	<b>Condition</b>	<b>Short Description</b>
FACILITY	ECL 19-0301	45	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 60-IIII	2 -5	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
FACILITY	40CFR 63-JJJJJJ	33, 34	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources
FACILITY	40CFR 63-ZZZZ	2 -6	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	19	Chemical accident prevention provisions
FACILITY	40CFR 82-F	20	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	6NYCRR 200.1(cq)	2 -2	Definition for Emergency Generator
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	10	Maintenance of equipment.
FACILITY	6NYCRR 201-1.4	46	Unavoidable noncompliance and

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FACILITY	6NYCRR 201-1.7	11	violations
FACILITY	6NYCRR 201-1.8	12	Recycling and Salvage Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2(a)	13	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	14	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	21, 37, 38	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.4(a)(4)	15	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4(a)(7)	2	General Conditions - Fees
FACILITY	6NYCRR 201-6.4(a)(8)	16, 1 -1	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4(c)	3	Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.4(c)(2)	4	Records of Monitoring, Sampling and Measurement
FACILITY	6NYCRR 201- 6.4(c)(3)(ii)	5	Reporting Requirements - Deviations and Noncompliance
FACILITY	6NYCRR 201-6.4(d)(4)	22	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(e)	6	Compliance Certification
FACILITY	6NYCRR 201-6.4(f)(6)	17	Off Permit Changes
FACILITY	6NYCRR 201-6.5(a)	2 -22	State Enforceable Requirements
FACILITY	6NYCRR 202-1.1	18	Required emissions tests.
FACILITY	6NYCRR 202-1.2	23	Notification.
FACILITY	6NYCRR 202-1.3(a)	24	Acceptable procedures - reference methods
FACILITY	6NYCRR 202-2.1	7	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	8, 2 -1	Emission Statements - record keeping requirements.
FACILITY	6NYCRR 211.1	25	General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	47	General Prohibitions - visible emissions limited.
FACILITY	6NYCRR 215.2	9	Open Fires - Prohibitions
FACILITY	6NYCRR 225-1.2(d)	26	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.2(g)	27	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.2(h)	28	Sulfur-in-Fuel Limitations
FACILITY	6NYCRR 225-1.6(f)	29	Excess Emission Reports

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0-00001	6NYCRR 227.2(b)(1)	40	Particulate emissions.
0-00002	6NYCRR 227.2(b)(1)	44	Particulate emissions.
0-00004/-/D05/ODG05	6NYCRR 227.2(b)(1)	2 -21	Particulate emissions.
FACILITY	6NYCRR 227-1.3(a)	30, 31, 32	Smoke Emission Limitations.
0-00004	6NYCRR 227-1.3(a)	2 -13	Smoke Emission Limitations.
0-00002	6NYCRR 227-2	41, 42	Reasonably available control technology for NOx
0-00001	6NYCRR 227-2.4(b)(1)(ii)	39	2010 NOx RACT presumptive limits.
0-00002	6NYCRR 227-2.5(c)	2 -7	Alternative RACT option.
0-00002	6NYCRR 231-10.5	2 -8, 2 -9, 2 -10, 2 -11, 2 -12	Permit requirements
0-00004	6NYCRR 231-13	2 -20	Tables and Emission Thresholds
FACILITY	6NYCRR 231-3.8	2 -3	Facility Shakedown Period
0-00004	6NYCRR 231-6.2	2 -14, 2 -15, 2 -16, 2 -17, 2 -18, 2 -19	Netting
FACILITY	6NYCRR 231-6.4	2 -4	Permit content and terms of issuance

**Applicability Discussion:**

Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301

This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

6 NYCRR 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8

Prohibits the reintroduction of collected air contaminants to the outside air



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6 NYCRR 201-3.2 (a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR 201-3.3 (a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6

This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)

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This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (4)

This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.4 (e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.4 (f) (6)

This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 202-1.1

This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.

6 NYCRR 202-2.5

This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2

This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

6 NYCRR 215.2

Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68

This Part lists the regulated substances and their applicability thresholds and sets the requirements for

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stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F

Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act Amendments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

**Facility Specific Requirements**

In addition to Title V, STARRETT CITY POWER PLANT has been determined to be subject to the following regulations:

40 CFR Part 60, Subpart IIII

This regulation defines performance standards for compression ignition stationary reciprocating internal combustion engines.

40 CFR Part 63, Subpart JJJJJ

This regulation covers facilities that own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.

40 CFR Part 63, Subpart ZZZZ

This regulation defines performance standards for stationary reciprocating internal combustion engines.

6 NYCRR 200.1 (cq)

Part 200.1(cq): This condition limits the emergency operation hours of three Nordberg engines to 500hrs/yr each.

6 NYCRR 201-6.5 (a)

This section identifies state enforceable requirements for Title V permits.

6 NYCRR 202-1.2

This regulation specifies that the department is to be notified at least 30 days in advance of any required stack test. The notification is to include a list of the procedures to be used that are acceptable to the department. Finally, free access to observe the stack test is to be provided to the department's

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representative.

6 NYCRR 202-1.3 (a)

This regulation requires that any emission testing, sampling and analytical determination used to determine compliance must use methods acceptable to the department. Acceptable test methods may include but are not limited to the reference methods found in 40 CFR Part 60 appendix A and Part 61, appendix B. In addition, unless otherwise specified, all emission test reports must be submitted within 60 days after completion of testing.

6 NYCRR 211.1

This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 225-1.2 (d)

Sulfur-in-fuel limitations that fire residual oil in the downstate after July 1, 2014.

6 NYCRR 225-1.2 (g)

Sulfur-in-fuel limitations for the purchase of distillate oil on or after July 1, 2014.

6 NYCRR 225-1.2 (h)

Sulfur-in-fuel limitation for the firing of distillate oil on or after July 1, 2016.

6 NYCRR 225-1.6 (f)

This citation requires subject facilities to submit excess emissions reports to the Department.

6 NYCRR 227.2 (b) (1)

This regulation is from the 1972 version of Part 227 and still remains as part of New York's SIP. The rule establishes a particulate limit of 0.10 lbs/mmBtu based on a 2 hour average emission for any oil fired stationary combustion installation.

6 NYCRR 227-1.3 (a)

This regulation prohibits any person from operating a stationary combustion installation which emits smoke equal to or greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

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6 NYCRR 227-2.4 (b) (1) (ii)

Future NO<sub>x</sub> RACT presumptive limits effective 7/1/14.

6 NYCRR 227-2.5 (c)

This provision allows the owner or operator to demonstrate that the applicable presumptive RACT emission limit in section 227-2.4 of this Subpart is not economically or technically feasible. Based on this determination the Department is allowed to set a higher emission source specific emission limit.

6 NYCRR 231-10.5

This section states what an applicant's permit must and will contain for conditions.

6 NYCRR 231-3.8

This section sets the allowable amount of time a facility may take for shakedown.

6 NYCRR 231-6.2

This section establishes the requirements for performing a netting analyses.

6 NYCRR 231-6.4

This section states what an applicant's permit must and will contain for conditions.

6 NYCRR Subpart 227-2

This regulation limits the emission of oxides of nitrogen (NO<sub>x</sub>) from stationary combustion installations (boilers, combustion turbines and internal combustion engines).

6 NYCRR Subpart 231-13

This Subpart contains the tables and emission thresholds used for determining rule applicability for this Part.

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**Compliance Certification**

**Summary of monitoring activities at STARRETT CITY POWER PLANT:**

<b>Location Facility/EU/EP/Process/ES</b>	<b>Cond No.</b>	<b>Type of Monitoring</b>
-----		
FACILITY	2-2	work practice involving specific operations
FACILITY	5	record keeping/maintenance procedures
FACILITY	6	record keeping/maintenance procedures
FACILITY	7	record keeping/maintenance procedures
FACILITY	26	work practice involving specific operations
FACILITY	27	work practice involving specific operations
FACILITY	28	work practice involving specific operations
FACILITY	29	record keeping/maintenance procedures
0-00001	40	intermittent emission testing
0-00002	44	intermittent emission testing
0-00004/-/D05/ODG05	2-21	intermittent emission testing
FACILITY	30	monitoring of process or control device parameters as surrogate
FACILITY	31	monitoring of process or control device parameters as surrogate
FACILITY	32	monitoring of process or control device parameters as surrogate
0-00004	2-13	monitoring of process or control device parameters as surrogate
0-00002	41	record keeping/maintenance procedures
0-00002	42	record keeping/maintenance procedures
0-00001	39	intermittent emission testing
0-00002	2-7	intermittent emission testing
0-00002	2-8	record keeping/maintenance procedures
0-00002	2-9	monitoring of process or control device parameters as surrogate
0-00002	2-10	intermittent emission testing
0-00002	2-11	intermittent emission testing
0-00002	2-12	monitoring of process or control device parameters as surrogate
0-00004	2-20	record keeping/maintenance procedures
FACILITY	2-3	record keeping/maintenance procedures
0-00004	2-14	record keeping/maintenance procedures
0-00004	2-15	monitoring of process or control device parameters as surrogate
0-00004	2-16	intermittent emission testing
0-00004	2-17	monitoring of process or control device parameters as surrogate
0-00004	2-18	intermittent emission testing
0-00004	2-19	monitoring of process or control device parameters as surrogate
FACILITY	2-4	record keeping/maintenance procedures
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**Basis for Monitoring**

In this modification, Starrett City has proposed to install two new caterpillar engines of 5646 bhp-hr (4MW) each In Emission Unit 0004 and to re-classify the existing three

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identical Nordberg engines of 2 MW each as emergency generators in Emission Unit 0002. Facility has demonstrated that with this modification, facility will be able to net out 6 NYCRR part 231 – New Source Review(NSR) applicability.

Facility wide net emission increase emissions of NO<sub>x</sub> and VOC will be limited below the significant net increase threshold 25 tpy threshold to avoid NSR major modification applicability. Permit contains the following conditions ensuring that the emissions does not exceed the permit limits:

6 NYCRR Part 231-6.2- Total annual NO<sub>x</sub> and VOC emissions rolled monthly of the Emission Unit 0004 which consists of new two caterpillar engines 0DG04 and 0DG05 are limited at 38.2 tpy and 4.58 tpy respectively.

These two engines has potential to emit (PTE) NO<sub>x</sub> and VOC of 38.2 tpy and 4.54 tpy of VOC. Facility performed a netting analysis since the PTEs are greater than the significant project threshold 2.5 tpy and demonstrated that the significant net emission increases of each contaminant is less than the threshold 25 tpy

Starrett City's Net Emission Increase of NO<sub>x</sub> is shown below.

Contemporaneous period has been selected as 1/1/20015-12/31/2019 for this modification  
NO<sub>x</sub> Project Emission Potential for this modification (PEP) = 38.2 tpy

Contemporaneous increase = 0

ERCs approved = 16.66 TPY

Net Emission increase =  $38.2 + 0 - 16.6 = 21.54 \text{ tpy} < 25$

Starrett City's Net Emission Increase for VOC is shown below:

Contemporaneous period has been selected as 1/1/20015-12/31/2019 for this modification  
VOC PEP = 4.58 tpy

Contemporaneous increase = 0

ERCs = 2.22 tpy

Net Emission Increase =  $4.58 - 0 - 2.22 = 2.36 \text{ tpy} < 25$

For two new Caterpillar engines, permit contains following monitoring, recordkeeping and recordkeeping conditions under 231-6.2 limiting 12 month rolling emissions of NO<sub>x</sub> to 38.2 tons per year and VOC to 4.58 ensures that emission will not exceed the permit limits:

1. Separate conditions requiring a formula that facility must use to calculate total annual 12 month rolling NO<sub>x</sub> and VOC emissions.
2. Separate Conditions requiring facility to verify NO<sub>x</sub> and VOC emission factors by a stack test once during the term of the permit



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3. Condition requiring facility to continuously monitor power output in KW-hr.
4. Condition requiring facility to limit the total annual power output of these two generators to 49056 megawatt-hours.

Facility has been approved for future Emission Reduction Credits (ERCs) of 16.66 tpy of NO<sub>x</sub> and 2.22tpy of VOC which are created by re-classifying the operation of three existing three Nordberg engines OODG1, OODG2, and OODG3 as emergency generators.

Baseline period selected = 1/1/2015 – 12/32/2016.

Baseline NO<sub>x</sub> emissions = 37.82 tpy; Baseline VOC emissions = 3.06 tpy

Future NO<sub>x</sub> Potential to Emit(PTE) = 21.17 tpy; Future VOC PTE = 0.84tpy

NO<sub>x</sub> Emission Reduction Credit(ERC) = 16.66 tpy; VOC ERC = 2.22 tpy

Conditions under 6 NYCRR Part 231-10 will ensure that the facility emergency generators emissions will meet the permit limits:

6 NYCRR Part 231-10 - With the operation of two new engines OODG04 and OODG05, the existing Nordberg engines OODG1, OODG2 & OODG3 will be operated as emergency generators. The NO<sub>x</sub> and VOC emissions from these three emergency generators are limited to 21.17 tpy and 0.84 tons tons per year respectively.

Part 231-10 permit conditions require facility to perform three Nordberg engines stack emission testing for NO<sub>x</sub> and VOC to verify compliance with the permit limit 21.17 tpy, and 0.84 tpy respectively once during the term of the permit. The most recent stack testing for NO<sub>x</sub> on October 2017 demonstrated that facility will be able to meet the 21.17 tpy of NO<sub>x</sub> with 500 hrs operating limit for each engine.

Part 200.1(cq): This condition is placed in the permit specifically to limit the operation hours of three Nordberg engines to 500hrs/yr each, once they start operating as emergency generators. Condition limits the operation of these three engines only for emergency purposes - that is when the usual supply of power is unavailable. The 500 hours of annual operation include emergency situations, routine maintenance, and routine exercising (for example, test firing the engine for one hour a week to ensure reliability).

Facility is required to install a non-resettable timer for each engine, and to record each type of operation. This condition will ensure that these engines will be operated only for emergency purposes and the NO<sub>x</sub> and VOC permit limits will be met.

6 NYCRR Part 227-2.4(f)(3): The two new caterpillar engines OODG04 and OODG05 are subject to this subpart. The presumptive NO<sub>x</sub> emission limit is 2.3grams/bhp is not placed in the permit since the NO<sub>x</sub> permit limit placed in the permit for Part 231-6.2, 0.5grams/bhp is more stringent.

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40 CFR Part 60 Subpart IIII - The new diesel generators 0DG04 and 0DG05 are subject to this regulation. Application and the supporting documentation indicates that the two identical CAT-175-20 engines will meet the engine standards for new engine in 40 CFR 64.4201(c), ie, Table 1 of 40 CFR 1039.101 Tier 4 emission standards for PM, NOX, NMHC and CO. Starrett City has proposed following emission limits:

PM10 - 0.02g/bhp-hr

NOx: 0.5g/bhp-hr

NMHC: 0.06g/bhp-hr and

CO: 0.65g/bhp-hr.

40 CFR Part 63 Subpart ZZZZ- Three existing Nordberg engines, OODG1, OODG2 & OODG3 and two new caterpillar engines, 0DG04 and 0DG05 are subject to this regulation. Each engine is equipped with an oxidation catalyst for the compliance with this Subpart and compliance will be certified every six months through an outside testing firm.

In this modification, Starrett City has proposed to install two new caterpillar engines of 5646 bhp-hr (4MW) each In Emission Unit 0004 and to re-classify the existing three identical Nordberg engines of 2 MW each as emergency generators in Emission Unit 0002. Facility has demonstrated that with this modification, facility will be able to net out 6 NYCRR part 231 – New Source Review(NSR) applicability.

Facility wide net emission increase emissions of NOx and VOC will be limited below the significant net increase threshold 25 tpy threshold to avoid NSR major modification applicability. Permit contains the following conditions ensuring that the emissions does not exceed the permit limits:

6 NYCRR Part 231-6.2- Total annual NOx and VOC emissions rolled monthly of the Emission Unit 0004 which consists of new two caterpillar engines 0DG04 and 0DG05 are limited at 38.2 tpy and 4.58 tpy respectively.

These two engines has potential to emit (PTE) NOx and VOC of 38.2 tpy and 4.54 tpy of VOC. Facility performed a netting analysis since the PTEs are greater than the significant project threshold 2.5 tpy and demonstrated that the significant net emission increases of each contaminant is less than the threshold 25 tpy

Starrett City's Net Emission Increase of NOx is shown below.

Contemporaneous period has been selected as 1/1/20015-12/31/2019 for this modification  
NOx Project Emission Potential for this modification (PEP) = 38.2 tpy

Contemporaneous increase = 0

ERCs approved = 16.66 TPY

Net Emission increase =  $38.2 + 0 - 16.6 = 21.54 \text{ tpy} < 25$

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Starrett City's Net Emission Increase for VOC is shown below:

Contemporaneous period has been selected as 1/1/20015-12/31/2019 for this modification

VOC PEP = 4.58 tpy

Contemporaneous increase = 0

ERCs = 2.22 tpy

Net Emission Increase =  $4.58 - 0 - 2.22 = 2.36$  tpy < 25 tpy

For two new Caterpillar engines, permit contains following monitoring, recordkeeping and recordkeeping conditions under 231-6.2 limiting 12 month rolling emissions of NOx to 38.2 tons per year and VOC to 4.58 ensures that emission will not exceed the permit limits:

5. Separate conditions requiring a formula that facility must use to calculate total annual 12 month rolling NOx and VOC emissions.
6. Separate Conditions requiring facility to verify NOx and VOC emission factors by a stack test once during the term of the permit
7. Condition requiring facility to continuously monitor power output in KW-hr.
8. Condition requiring facility to limit the total annual power output of these two generators to 49056 megawatt-hours.

Facility has been approved for future Emission Reduction Credits (ERCs) of 16.66 tpy of NOx and 2.22tpy of VOC which are created by re-classifying the operation of three existing three Nordberg engines OODG1, OODG2, and OODG3 as emergency generators. Baseline period selected = 1/1/2015 – 12/32/2016.

Baseline NOx emissions = 37.82 tpy; Baseline VOC emissions = 3.06 tpy

Future NOx Potential to Emit(PTE) = 21.17 tpy; Future VOC PTE = 0.84tpy

NOx Emission Reduction Credit(ERC) = 16.66 tpy; VOC ERC = 2.22 tpy

Conditions under 6 NYCRR Part 231-10 will ensure that the facility emergency generators emissions will meet the permit limits:

6 NYCRR Part 231-10 - With the operation of two new engines OODG04 and OODG05, the existing Nordberg engines OODG1, OODG2 & OODG3 will be operated as emergency generators. The NOx and VOC emissions from these three emergency generators are limited to 21.17 tpy and 0.84 tons tons per year respectively.

Part 231-10 permit conditions require facility to perform three Nordberg engines stack emission testing for NOx and VOC to verify compliance with the permit limit 21.17 tpy, and 0.84 tpy respectively once during the term of the permit. The most recent stack

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testing for NOx on October 2017 demonstrated that facility will be able to meet the 21.17 tpy of NOx with 500 hrs operating limit for each engine.

Part 200.1(cq): This condition is placed in the permit specifically to limit the operation hours of three Nordberg engines to 500hrs/yr each, once they start operating as emergency generators. Condition limits the operation of these three engines only for emergency purposes - that is when the usual supply of power is unavailable. The 500 hours of annual operation include emergency situations, routine maintenance, and routine exercising (for example, test firing the engine for one hour a week to ensure reliability).

Facility is required to install a non-resettable timer for each engine, and to record each type of operation. This condition will ensure that these engines will be operated only for emergency purposes and the NOx and VOC permit limits will be met .

6 NYCRR Part 227-2.4(f)(3): The two new caterpillar engines 0DG04 and 0DG05 are subject to this subpart. The presumptive NOx emission limit is 2.3grams/bhp is not placed in the permit since the NOx permit limit placed in the permit for Part 231-6.2, 0.5grams/bhp is more stringent.

40 CFR Part 60 Subpart IIII - The new diesel generators 0DG04 and 0DG05 are subject to this regulation. Application and the supporting documentation states that the two identical CAT-175-20 engines will meet the engine standards for new engine in 40 CFR 64.4201(c), ie, Table 1 of 40 CFR 1039.101 Tier 4 emission standards for PM, NOX, NMHC and CO. Starrett City states that Caterpillar manufacturer guarantees the following emission rates:

PM10 - 0.02g/bhp-hr

NOx: 0.5g/bhp-hr

NMHC: 0.06g/bhp-hr and

CO: 0.65g/bhp-hr.

40 CFR Part 63 Subpart ZZZZ- Three existing Nordberg engines, OODG1, OODG2 & OODG3 and two new caterpillar engines, 0DG04 and 0DG05 are subject to this regulation. Each Nordberg engine is equipped with an oxidation catalyst and will continue to utilize the oxidation catalyst. The new Caterpillar engines include a diesel oxidation catalyst for CO reduction .

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